Extreme Scale Computing, Co-Design

Ramon Ravelo, Qi An, Timothy C. Germann, and Brad Lee Holian, “Large-scale molecular dynamics simulations of shock induced plasticity in tantalum single crystals,” AIP Conference Proceedings 1426, 1263–1266 (2012).

Frank J. Cherne, Guy Dimonte, and Timothy C. Germann, “Richtymer-Meshkov instability examined with large-scale molecular dynamics simulations,” AIP Conference Proceedings 1426, 1307–1310 (2012).

A. Hunter, I.J. Beyerlein, T.C. Germann, and M. Koslowski, “Influence of the stacking fault energy surface on partial dislocations in fcc metals with a three-dimensional phase field dislocations dynamics model,” Physical Review B - Condensed Matter and Materials Physics 84(14) (2011).

J. Wang, I.J. Beyerlein, A. Misra, S.M. Valone, and T.C. Germann, “Atomistic modeling of dislocation-interface interactions,” Conference Program for the 3rd International Conference on Heterogeneous Materials Mechanics, 39–46 (2011).

James Ahrens, Li-Ta Lo, Boonthanome Nouanesengsy, John Patchett, and Allen McPherson, “Petscale visualization: Approaches and initial results,” 2008 Workshop on Ultrascale Visualization, 24–28 (2008).

James Ahrens and Kurt Debattista, “Guest editor’s introduction: Special section on the Eurographics Symposium on Parallel Graphics and Visualization (EGPGV),” IEEE Transactions on Visualization and Computer Graphics 18(1), 3–4 (2012).

Uliana Popov, Eddy Chandra, Katrin Heitmann, Salman Habib, James Ahrens, and Alex Pang, “Analyzing the evolution of large scale structures in the universe with velocity based methods,” IEEE Pacific Visualization Symposium, 49–56 (2012).

Christopher M. Brislawn, Jonathan L. Woodring, Susan M. Mniszewski, David E. DeMarle, and James P. Ahrens, “Subband coding for large-scale scientific simulation data using JPEG 2000,” Proceedings of the IEEE Southwest Symposium on Image Analysis and Interpretation, 201–204 (2012).

K.J. Blackmore, L. Elbaz, E. Bauer, E.L. Brosha, K. More, T.M. McCleskey, and A.K. Burrell, “High surface area molybdenum nitride support for fuel cell electrodes,” Journal of the Electrochemical Society 158(10), B1255–B1259 (2011).

James Ahrens, Bruce Hendrickson, Gabrielle Long, Steve Miller, Rob Ross, and Dean Williams, “Data-intensive science in the US DOE: Case studies and future challenges,” Computing in Science and Engineering 13(6), 14–23 (2011).

Guofeng Cui, Pei Kang Shen, Hui Meng, Jie Zhao, and Gang Wu, “Tungsten carbide as supports for Pt electrocatalysts with improved CO tolerance in methanol oxidation,” Journal of Power Sources 196(15), 6125–6130 (2011).

Jonathan Woodring, Katrin Heitmann, James Ahrens, Patricia Fasel, Chung-Hsing Hsu, Salman Habib, and Adrian Pope, “Analyzing and visualizing cosmological simulations with ParaView,” Astrophysical Journal, Supplement Series 195(1) (2011).

Christopher Mitchell, James Ahrens, and Jun Wang, “VisIO: Enabling interactive visualization of ultra-scale, time series data via high-bandwidth distributed I/O systems,” Proceedings - 25th IEEE International Parallel and Distributed Processing Symposium, 68–79 (2011).

Sean Williams, Mark Petersen, Peer-Timo Bremer, Matthew Hecht, Valerio Pascucci, James Ahrens, Mario Hlawitschka, and Bernd Hamann, “Adoptive extraction and quantification of geophysical vortices,” IEEE Transactions on Visualization and Computer Graphics 17(12), 2088–2095 (2011).

Jonathan Woodring, Susan Mniszewski, Christopher Brislawn, David DeMarle, and James Ahrens, “Revisiting wavelet compression for large-scale climate data using JPEG 2000 and ensuring data precision,” IEEE Symposium on Large-Scale Data Analysis and Visualization 2011, 31–38 (2011).